Comments on:

draft Meeting Summary of the Marsh Sampling Workshop on September 26, 2005 (prepared October 6, 2005 by Delia Ivanoff and Pam Lehr)

These are compiled technical comments from workshop attendees:
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General

1) The notes from this workshop are valuable in helping us capture the content of the discussions that took place with the experienced field staff. The draft notes do a good job of capturing a significant amount of the information discussed; however, there are instances where additional clarification in the notes will improve them. One general area where more text is needed involves the contributions to discussions made by DOI staff. Several areas are identified below in the specific comments.

2) The meeting summary should clearly state that the suggestions listed were made by individuals and were discussed at the workshop, but they are not necessarily a consensus recommendation from the work group back to the TOC or others.

3) We need to provide clear guidance on what sampling crews should do when they determine that there is greater than 10 cm of water, and that suspended sediments in the water seem to be representative of the sampling area.

4) We should insure that any changes in sampling techniques should be based on data where possible, and not just on individual judgment.

5) If at any time we collectively determine the need for a small-scale study to be conducted to help refine sampling techniques, we will report to our Principals the need for resources to conduct such a study.

6) One item missing from these notes is mention of how this fits into the training needs/requirements for field crews (e.g., certificate of attendance, actual training, etc.).

Specific

1) p. 2, Table 1: George Schardt contact is: george_schardt@nps.gov

2) p. 3, Marsh Sampling Protocol, 2nd bullet: "*Non-representative data should be flagged in the database and not used for compliance purposes.*" This statement may be appropriate for FDEP's regulatory compliance, but not for TOC purposes. The CD states that all data are to be examined. Although there is technical overlap and individual interest, TOC's oversight role is on research and monitoring related to CD compliance.

Flagging or not flagging data is not an aspect of sampling. The sampling team should follow the written protocol when sampling. If "non-representative" is defined as a certain deviation from a historical record, then we disagree. Such flagging is inappropriate for TOC purposes because compliance levels are based on concentrations that are expected to only rarely be exceeded under the hypothesis of no degradation from the base period. Thus, throwing out unusually high values would greatly reduce the power of the compliance test to identify violations.

Important point: caution is needed in making general statements that have specific implications.

3) p. 3, Marsh Sampling Protocol, 2nd bullet: "*It would be helpful to set firm criteria for flagging data (e.g., very high total suspended solids [TSS]).*" This topic was discussed at the workshop; however, the conclusion was that more was needed to be examined to make recommendations of this nature.

4) p. 3, Marsh Sampling Protocol, 3rd bullet: Add to end of last sentence, "as long as it is recorded" as this was discussed at the workshop.

5) p. 3, Marsh Sampling Protocol, 5th bullet: "*The current practice of filling large (2-liter) bottles at mid-depth is more likely to entrain floc and should be discontinued.*" This was discussed at the workshop; however, the discussion focused on recognition that any changes in sampling techniques should be based on data where possible, and not just on individual judgment.

6) p. 3, Marsh Sampling Protocol, 7th bullet: "*Sampling at mid-depth should also be changed to sampling 5-10 cm below the surface, which is visible to the sampler.*" This was discussed in detail at the workshop. The notes should reflect that this was actually a recommendation for further consideration.

7) p. 4, Marsh Sampling Protocol, 9th bullet, on dissolved constituents: The notes need to reflect the discussion about the interactions between holding time and how samples are preserved on ice during collection. The discussion at the workshop recognized the need to examine data on this issue (or design a small-scale study if needed).

8) p. 4, Marsh Sampling Protocol, 11th bullet, on boardwalks: Other issues associated with boardwalks were discussed at the workshop and need to be captured in the notes. Specifically, there was a discussion about the limitations of sampling from boardwalks, including issues related to representativeness of the sample collection and what to do if no water immediately there.

9) p. 4, Current Monitoring Plan, 2nd bullet: At water depths between 10 and 20 cm, the following parameters are measured: Temperature, specific conductivity, pH, TP, Cl, and DO.

10) p. 5, QA/QC Requirements, 8th bullet, on capability: The discussion on "certification" of field personnel to collect samples did not result in a specific conclusion. Up until the day of the workshop, Refuge personnel were told that the workshop would function as the field collection training portion. In fact, Refuge personnel repeatedly asked for this and requested that the workshop approach for training be split into separate days for field and laboratory training to provide the attention required.

11) p. 5, QA/QC Requirements, 10th bullet, on holding time: Same comment as #7 above, in which examination of data, rather than personal judgment, is the appropriate mechanism to examine this issue.

12) p. 6, Open Discussion: There are several big-picture topics identified in this section that was discussed at the workshop as having a need for more specific attention. These should be highlighted and captured in the Action Items section. These include:
- representativeness (1st bullet)
- differentiation between suspended solids/color/settled material (bullets 1, 5, 6)
- additional guidance on use of best professional judgment by field crew (1st bullet)

13) p. 8, Action Item Table, row 3 on typical marsh conditions characterization: This is coupled to discussions on representativeness and site characterization (vegetation) and should be directed by staff doing the sampling in the field.

14) p. 8, Action Item Table, row 8 on sample parameters for elimination: It is vital that this exercise involve discussion of both issues involved with bottle size, and (more importantly) the parameters themselves. A specific effort needs to examine the data to determine whether or not a particular parameter is valuable.